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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHAWAN, VIJAY B

ART UNIT PAPER NUMBER

2654

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/000,228	Applicant(s) GRAUMANN, DAVID L.	
	Examiner Vijay B. Chawan	Art Unit 2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 2654

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tzirkel-Hancock (6,133,904) in view of Wise et al., (5,884,262), and further in view of Barclay et al., (5,960,399).

As per claim 1 Tzirkel-Hancock teaches a method to perform speech recognition, comprising:

receiving a set of signals representing speech (Col.33, lines 7-12);

creating a set of speech features from said signals (Col.33, lines 38-39).

Tzirkel-Hancock et al., while teaching receiving a request for speech recognition information, wherein receiving said request comprises receiving a subrogation indicator (Col.8, lines 1-13, 49-51, Col.10, lines 52-65, Fig.13, Col.31, lines 29-55, line 67 – Col.32, lines 1-4), do not specifically teach receiving a request for speech recognition information over a voice channel, and, communicating said speech features over said voice channel. Wise et al., do teach receiving a request for speech recognition information over a voice channel, and, communicating said speech features over said voice channel in a distributed speech recognition system (Figures 1-3, Col.3, lines 51 – 61, Col.5, line 38 – Col.6, line 67, Col.7, line 28 – Col.8, line 36). Therefore it would have been obvious to one with ordinary skill in the art at the time of invention to use the distributed speech recognition method of Wise et al., in the method of Tzirkel-Hancock, because this would efficiently enable the user to access information in an environment employing automatic speech recognition over a voice channel.

Tzirkel-Hancock in view of Wise, while teaching the method of claim 1, do not specifically teach communicating said speech features over said voice channel at a lower bandwidth than a bandwidth associated with said set of signals representing said speech when said subrogation indicator is detected. Barclay teaches sending speech features sent via a communication channel that allow low bandwidth channels to be used while still maintaining real time response (abstract, Col.4, lines 1-22). Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to use the method of Barclay et al., of sending speech features sent via a communication channel that allow low bandwidth channels to be used while still maintaining real time response In the method of Tzirkel-Hancock in view of Wise, because this would enable one to recognize the advantage that large vocabularies and grammars can be used to process speech in real time with equipment of limited memory and/or computing power while using low bandwidth communications channels (Col.4, lines 10-16).

As per claim 2, Tzirkel-Hancock teaches the method of claim 1, wherein said receiving said request comprises receiving a prompt for a voice command, and receiving a subrogation (alternate) indicator (Col.31, lines 29-55, line 67 – Col.32, line 4).

As per claim 3, Tzirkel-Hancock teaches the method of claim 1, wherein said subrogation indicator is a predefined pattern of bits (Col.31, lines 29-55).

As per claim 4, Tzirkel-Hancock teaches the method of claim 1, wherein said creating comprises extracting said speech features from said signals, and compressing said speech features (Col.31, lines 21-28).

As per claim 5, Tzirkel-Hancock teaches the method of claim 4, further applying comprising error correction to said compressed speech features (dynamic programming, Col.31, lines 21-55, line 67 – Col.32, line 4).

As per claim 6, Tzirkel-Hancock teaches the method of claim 4, further comprising determining periods of silence in said signals (Col.29, lines 29-40).

As per claim 7, Tzirkel-Hancock teaches the method of claim 1, wherein said communicating comprises creating a first stream of bits representing said speech, receiving a second stream of bits representing said speech features, replacing said first stream of bits with said second stream of bits, and sending said second stream of bits over said voice channel (Col.8, lines 49-51).

As per claim 8, Tzirkel-Hancock teaches the method of claim 7, wherein said creating comprises receiving an analog audio waveform representing said speech, converting said analog audio waveform into a digital audio signal, and compressing said digital audio signal using a voice encoding algorithm (Col.7, lines 30-38).

As per claim 9, Tzirkel-Hancock teaches the method of claim 7, wherein said replacing comprises determining a start point and an end point for said first stream of bits, determining a start point and an end point for said second stream of bits, and replacing said first stream of bits with said second stream of bits using said start points and said end points (Col.8, lines 52-65, Col.11, lines 39-59).

As per claim 10, Tzirkel-Hancock teaches the method of claim 9, wherein said replacing said first stream of bits with said second stream of bits using said start points and said end points comprises creating a frame of bits from said start point for said first

Art Unit: 2654

stream of bits, overlaying said frame of bits with said start point for said second stream of bits, sending said frame of bits over said voice channel, and, continuing above steps until said end point for said second stream of bits is reached (Col.8, lines 49-65, Col.10, lines 52-65).

As per claim 11, Tzirkel-Hancock teaches the method of claim 9, wherein said sending comprises inserting a start indicator before said start point for said second stream of bits, and an indicator after said end point for said second stream of bits, and sending said second stream of bits with said start and end indicators (Col.8, lines 49-65).

Claims 12-16 are directed toward the receiving end of the data transmitted using the method of claims 1-11, and are similar in scope and content and are rejected under similar rationale.

Claims 17-22 are directed toward a system implementing the method of claims 1-11, and are similar in scope and content and are rejected under similar rationale.

Claims 23-24 are directed toward a speech recognition encoder claimed in system claims 17-22 and implement the method of claims 1-11 similar in scope and content, and are rejected under similar rationale.

Claims 25-26 are directed toward a speech recognition decoder claimed in method claims 12-16 and implement the method of claims 12-16 similar in scope and content, and are rejected under similar rationale.

Claims 27-38 are directed toward an article containing instructions to implement the method of claims 1-16, and are similar in scope and content and are rejected under similar rationale.

Response to Arguments


4. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vijay B. Chawan whose telephone number is (571) 272-7601. The examiner can normally be reached on Monday Through Friday 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Vijay B. Chawan
Primary Examiner
Art Unit 2654

VIJAY CHAWAN
PRIMARY EXAMINER

vbc
1/19/06